Complete Summary

GUIDELINE TITLE

Gestational diabetes.

BIBLIOGRAPHIC SOURCE(S)

Gestational diabetes. Philadelphia (PA): Intracorp; 2005. Various p. [24 references]

GUIDELINE STATUS

This is the current release of the guideline.

All Intracorp guidelines are reviewed annually and updated as necessary, but no less frequently than every 2 years. This guideline is effective from July 1, 2005 to July 1, 2007.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Gestational diabetes

GUIDELINE CATEGORY

Counseling
Diagnosis
Evaluation
Management
Prevention
Risk Assessment

Screening
Treatment

CLINICAL SPECIALTY

Endocrinology
Family Practice
Obstetrics and Gynecology
Preventive Medicine

INTENDED USERS

Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Utilization Management

GUIDELINE OBJECTIVE(S)

To present recommendations for the diagnosis, management, and treatment of gestational diabetes that will assist medical management leaders to make appropriate benefit coverage determinations

TARGET POPULATION

Pregnant women with possible or confirmed gestational diabetes

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation/Risk Assessment

1. Physical examination and assessment of signs and symptoms
2. Diagnostic tests
    - Blood chemistries and urinalysis
    - 1-hour 50 g oral glucose tolerance test (OGTT)
    - Repeat serum glucose level at two hours if OGTT positive
    - A 3-hour GTT

Management/Treatment/Prevention/Counseling

1. Diet
2. Insulin
3. Checking glucose level every morning and after at least one meal per day
4. Daily monitoring by the mother for at least three fetal movements and weekly non-stress tests
5. Assessment of fetal pulmonary maturation before elective delivery prior to 39 weeks gestation
6. Encouraging women to breastfeed
7. Referral to specialists

MAJOR OUTCOMES CONSIDERED

Glycemic control

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Searches were performed of the following resources: reviews by independent medical technology assessment vendors (such as the Cochrane Library, HAYES); PubMed; MD Consult; the Centers for Disease Control and Prevention (CDC); the U.S. Food and Drug Administration (FDA); professional society position statements and recommended guidelines; peer reviewed medical and technology publications and journals; medical journals by specialty; National Library of Medicine; Agency for Healthcare Research and Quality; Centers for Medicare and Medicaid Services; and Federal and State Jurisdictional mandates.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Not Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A draft Clinical Resource Tool (CRT or guideline) is prepared by a primary researcher and presented to the Medical Technology Assessment Committee or the Intracorp Guideline Quality Committee, dependent upon guideline product type.

The Medical Technology Assessment Committee is the governing body for the assessment of emerging and evolving technology. This Committee is comprised of a Medical Technology Assessment Medical Director, the Benefit and Coverage Medical Director, CIGNA Pharmacy, physicians from across the enterprise, the Clinical Resource Unit staff, Legal Department, Operations, and Quality. The Intracorp Guideline Quality Committee is similarly staffed by Senior and Associate Disability Medical Directors.

Revisions are suggested and considered. A vote is taken for acceptance or denial of the CRT.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Diagnostic Confirmation

Subjective Findings

- Report of changes in "input and output":
  - Polydipsia (excessive thirst)
  - Polyphagia (abnormally high intake of food)
  - Polyuria (excessive secretion and excretion of urine)
- Vague symptoms of fatigue and abdominal discomfort

Objective Findings

- Elevated serum glucose
- Glucosuria (glucose found in urine)
- Ketonuria (acetone bodies in urine)
- An elevated hemoglobin A1c
- Weight loss

Diagnostic Tests

- 1-hour 50 gram (g) oral glucose tolerance test (OGTT)
    - This test is performed on all pregnant women between 24 and 28 weeks' gestation.
    - If test is positive (130 mg per dL or higher), a repeat serum glucose level is drawn at two hours.
    - If test is still positive at two hours or the patient has other risk factors for gestational diabetes (GDM), then a three hour GTT is performed.
- The three hour GTT:
    - The woman should fast for 10 to 14 hours prior to the test.
    - Three days prior to the test, the woman should have an unrestricted diet.
    - Venous blood samples are obtained one, two, and three hours after an oral 100-g glucose load. Two or more abnormal values are diagnostic for gestational diabetes.
    - The National Diabetes Data Group (NDDG) has established the following criteria for abnormal results on the 100-g GTT. GDM is diagnosed if two or more of the values are met or exceeded:
        - Fasting: 105 mg per dL (5.8 mmol per L)
        - 1-hour: 190 mg per dL (10.5 mmol per L)
        - 2-hour: 165 mg per dL (9.2 mmol per L)
        - 3-hour: 145 mg per dL (8.0 mmol per L)

Differential Diagnosis

- In patients presenting with polyuria, polydipsia, hyperglycemia, and weight loss, the diagnosis of diabetes is relatively evident, with limited differential diagnoses that includes:
    - Hyperthyroidism
    - Endocrine tumors (e.g., Cushing's syndrome and renal tumors)
    - Exogenous steroid use
    - Decreased insulin secretion due to pharmacologic agents (e.g., thiazide diuretics, phenytoin, pentamidine)

Treatment

Treatment Options

- The first line of therapy is diet.
- If a woman fails diet therapy, insulin is the only acceptable hypoglycemic agent since oral hypoglycemic agents have been associated with teratogenic properties. Most experts initiate insulin when the blood glucose is over 95 to 105 mg/dL fasting, 140 mg/dL 1 hour-postprandial (following a meal), or 120

mg/dL 2 hours-postprandial. A woman should check her glucose every morning and after at least one meal per day. The hemoglobin A1C reflects overall control well but does not change rapidly enough to alter daily insulin doses.
- Breastfeeding improves glycemic control and should be encouraged in women who have gestational diabetes.
- The timing of delivery needs to be determined. Most gestations should go to term, but issues of lung maturity, macrosomia, and risk for stillbirth must be taken into account.
- In uncomplicated GDM, daily monitoring by the mother for at least three fetal movements and weekly non-stress tests are indicated. Assessment of fetal pulmonary maturation is universally recommended before elective delivery prior to 39 weeks gestation.

Duration of Medical Treatment

- Medical - Optimal: 3 day(s), Maximal: 180 day(s)

- The treatment should continue through routine postpartum care. Since a certain percentage of women with GDM truly had previously undiagnosed diabetes mellitus, close follow-up of the maternal glucose is indicated to determine if long-term hypoglycemic agents will be required.
- During the pregnancy, close follow-up is required in the first two trimesters to assess glucose control and in the third trimester to assess glucose control and fetal and maternal well-being.

Additional provider information regarding primary care visit schedules, referral options, specialty care, and durable medical equipment are provided in the original guideline document.

The original guideline document also provides a list of red flags that may affect disability duration, and return to work goals, including

- Blood sugar adequately controlled by diet
- Blood sugar controlled by medications
- Hospitalization required

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate diagnosis, management, and treatment of gestational diabetes that assist medical management leaders to make appropriate benefit coverage determinations

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

The guideline recommendations were partially adapted from:

National Institute of Diabetes and Digestive and Kidney Disease (NIDDK). National Diabetes Data Group. Accessed July 6, 2005. Available at: http://www.niddk.nih.gov/fund/divisions/dem/nddg.htm

DATE RELEASED

2005

GUIDELINE DEVELOPER(S)

Intracorp - Public For Profit Organization

SOURCE(S) OF FUNDING

Intracorp

GUIDELINE COMMITTEE

CIGNA Clinical Resources Unit (CRU)
Intracorp Disability Clinical Advisory Team (DCAT)
Medical Technology Assessment Committee (MTAC)
Intracorp Guideline Quality Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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GUIDELINE AVAILABILITY

Electronic copies: Intracorp guidelines are available for a licensing fee via a password protected, secure Web site at www.intracorp.com.

Reprints of complete guideline content may be purchased for $35.00 per title (plus tax in TX at 8.25% and CT at 1.0%). Please send e-mail request to lbowman@mail.intracorp.com.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Policies and procedures. Medical Technology Assessment Committee Review Process. Philadelphia (PA): Intracorp; 2004. 4 p.
- Online guideline user trial. Register for Claims Toolbox access at www.intracorp.com.

Licensing information and pricing: Available from Intracorp, 1601 Chestnut Street, TL-09C, Philadelphia, PA 19192; e-mail: lbowman@mail.intracorp.com.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on August 10, 2005. The information was verified by the guideline developer on August 31, 2005.

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DISCLAIMER

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